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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,212	10/23/2003	Yun Lin	MS306620.1/MSFTP527US	8192

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CLEVELAND, OH 44114

EXAMINER
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THAI, HANH B

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/692,212

Applicant(s)

LIN ET AL.

Examin r

Hanh B Thai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25,36-40 and 43 is/are pending in the application.
- 4a) Of the above claim(s) 26-35,41 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25,36-40 and 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-43 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                              |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/29/04</u> . | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-25, 36-40 and 43, drawn to a distributed or remote access on client and server network, classified in class 707, subclass 10.
  - II. Claims 26-33 and 41, drawn to a concurrent data transfer system, classified in class 710, subclass 20.
  - III. Claims 34-35, drawn to a network resource access controlling system, classified in class 709, subclass 229.
  - IV. Claim 42, drawn to a distributed data processing between client and remote server, classified in class 709, subclass 203.

Inventions I, II, III and IV are related as combination and subcombinations. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination (I) as claimed does not require the particulars of the subcombinations (II, III or IV) as claimed because it is a computer data processing system that need not transfer data over the network. The subcombination II has separate utility such as an identify access control resources from the network. The subcombination II has separate utility such as a data processing network for transmitting data between client and remote server. Therefore, the inventions are distinct; however, they could be usable together.

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2. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for any of Group I-IV is not required for any of the other of Groups I-IV, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. During a telephone conversation with Himanshu S. Amin (Attorney Reg. no. 40,894) on January 14, 2005 a provisional election was made with traverse to prosecute the invention of group I, claims 1-25, 36-40 and 43. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-33, 34-35 and 41-42 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-16, 18-25, 36-40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolff (US 6,185,601) in view of Mansour et al. (US Pub. 2002/0109718 A1).

Regarding claims 1 and 43, Wolff discloses remote file system, comprising:

- one or more surrogate providers comprising at least a first surrogate provider that selectively caches at least a subset of data from at least one online server (Fig. 1A-C, Fig. 3A-C corresponding text and col. 15, lines 49-58; col.7, lines 38-44 and line 62 to col.8, line 11; col.10, lines 13-19, Wolff); and
- one or more client computers that receive and store the subset of data to their respective local databases (client A-B, Fig. 11A and corresponding text and col. 15, lines 49-58, Wolff).

Wolff does not explicitly disclose the offline use by the respective client computers to facilitate a seamless operation of data retrieval across connectivity states for a user. Mansour discloses a platform-independent distributed user interface server architecture that clients can perform actions and operations offline ([0153]; [0155]-[0158] and [0161], Mansour). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolff to include the claimed feature as taught by Mansour because it would provide an efficient system with flexibility of sharing data resources and easily support ([0017], Mansour).

Regarding claim 2, Wolff/Mansour combination discloses the system of claim 1, the first surrogate provider is a client side caching (CSC) component that supports connection state transitions at the directory level on a logical namespace (col.9, lines 28-61, Wolff).

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Regarding claim 3, Wolff/Mansour combination discloses the system of claim 1 , further comprising an MUP that supports the one or more surrogate providers at the directory level to handle incoming requests from a user (col.6, line 51 to col. 7, line 17 and col.15, lines 17-27, Wolff).

Regarding claim 4, Wolff/Mansour combination discloses the system of claim 1, further comprising a second surrogate provider that translates a logical path into a physical path (step 1208, Fig.10F; col.10, lines 44-49; col.56, line 62 to col.57, line 19, Wolff)

Regarding claim 5, Wolff/Mansour combination discloses the system of claim 4, the second surrogate provider is a DFS component that points to at least one physical share or at least one physical server (col.10, lines 1-6, Wolff).

Regarding claim 7, Wolff/Mansour combination discloses system of claim 1, the data comprises file access parameters comprising at least one of object access rights and share access rights, the file access parameters corresponding to a cached tile object (step 1196, Fig.11B-C; 1446, Fig.10I; col.6, line 51 to col. 7, line 17, Wolff).

Regarding claim 8, Wolff/Mansour combination discloses the system of claim 2, the CSC component caches the logical namespace of a file request such that when accessed during an offline state, the file is presented to a user as if it resides at a remote server location (col.7, line 62 to col. 8, line 11 and col. 10, lines 13-19, Wolff).

Regarding claim 9, Wolff/Mansour combination discloses the system of claim 2, the CSC component maintains collection based data structures in logical namespace, the data structures comprising a server connection structure (SrvCall), a share mapping structure (Netlkoot), and a per-user share mapping structure (VNetRoot) to facilitate handling at least one of create, read,

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and write requests (col.4, lines 50-62; col.6, line 51 to col.7, line 17 and col. 9, lines 34-64, Wolff).

Regarding claim 10, Wolff/Mansour combination discloses the system of claim 2, the CSC component creates file based data structures and shares the data structures with one or more redirectors to facilitate handling at least one of create, read, and write requests, the one or more redirectors operatively connected to one or more network providers (col.13, lines 23-31, Wolff).

Regarding claim 11, Wolff/Mansour combination discloses the system of claim 1, the first surrogate provider comprises a pre-process handler and a post-process handler which facilitates responding to any one of create, read, and write requests (col. 6, line 51 to col. 7, line 17, Wolff).

Regarding claim 12, Wolff/Mansour combination discloses the system of claim 2, the surrogate providers determine who owns a path request whereby the CSC components makes an initial determination before allowing the DFS component to examine the path to identify any DFS links (col. 8, lines 13-36 and col.50, lines 41-61, Wolff).

Regarding claim 13, Wolff/Mansour combination discloses the system of claim 12, the CSC component operates cooperatively with the DFS component to determine whether DFS links are present in the path while in an online connection state (col. 15, lines 49-58; col.7, lines 38-44 and line 62 to col.8, line 11; col.10, lines 13-19, Wolff).

Regarding claim 14, Wolff/Mansour combination discloses the system of claim 2, the CSC component determines whether to cache an object tile associated with the path (Fig.8 and corresponding text, Wolff).

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Regarding claim 15, Wolff/Mansour combination discloses the system of claim 2, further comprising a CSC agent pings the server to determine whether the server is online (col. 15, lines 49-58; col.7, lines 38-44 and line 62 to col.8, line 11; col.10, lines 13-19 and col.50, lines 41-61, Wolff).

Regarding claim 16, Wolff/Mansour combination discloses the system of claim 2, the CSC component tracking substantially all DFS links included in the logical namespace persistently to transition a connection state at a proper logical directory which facilitates minimizing a scope of offlineness to a physical share (col.6, line 51 to col. 7, line 17; col.14, lines 26-35 and col.15, lines 17-27, Wolff).

Regarding claim 18, Wolff/Mansour combination discloses the system of claim 1, the client computer accesses remote tiles offline by retrieving them from their respective local databases if file access parameters are satisfied (col.7, lines 7-9 and 38-44; col.51, lines 32-53, Wolff).

Regarding claim 19, Wolff/Mansour combination discloses the system of claim 1, the first surrogate provider keeps track of DFS links corresponding to every object, wherein the DFS links are physical shares (col.8, lines 45-63 and col.17, lines 20-45, Wolff).

Regarding claim 20, Wolff/Mansour combination discloses the system of claim 1, the first surrogate provider determines whether the request against a specific object should be carried out offline or not, before returning to MUP, by looking at a corresponding physical share connection state (col.19, line 45 to col. 20, line 39, Wolff).



Regarding claim 21, Wolff discloses a method that facilitates maintaining access to remote tiles (e.g., server-based) during any period of disconnect from a remote location, comprising:

- providing one or more client computers, each client computer comprising a local data store (client A-B, Fig. 11A and corresponding text and col. 15, lines 49-58, Wolff); and
- selectively caching one or more tile objects from at least one online server (Fig. 1A-C, Fig. 3A-C corresponding text and col. 15, lines 49-58; col. 7, lines 38-44 and line 62 to col. 8, line 11; col. 10, lines 13-19, Wolff).

Wolff does not explicitly disclose the respective data store for subsequent offline use by the client computer. Mansour discloses a platform-independent distributed user interface server architecture that clients can perform actions and operations offline ([0153]; [0155]-[0158] and [0161], Mansour). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolff to include the claimed feature as taught by Mansour because it would provide an efficient system with flexibility of sharing data resources and easily support ([0017], Mansour).

Regarding claim 22, Wolff/Mansour combination discloses the method of claim 21, further comprising maintaining access to the one or more tiles cached while offline ([0153]; [0155]-[0158] and [0161], Mansour).

Regarding claim 23, Wolff/Mansour combination discloses the method of claim 21, further comprising caching one or more file access parameters that correspond to the one or more

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cached file objects to permit client access to the file objects while offline ([0153]; [0155]-[0158] and [0161], Mansour).

Regarding claim 24, Wolff/Mansour combination discloses the method of claim 21, when connected to the remote Location, retrieving a file object from the local data store to mitigate bandwidth usage with respect to accessing the remote location despite being connected to the remote location (col. 7, lines 19-35, Wolff).

Regarding claim 25, Wolff/Mansour combination discloses the method of claim 21, further comprising:

mapping a logical namespace to a physical namespace to facilitate keeping track of cached files and enumerating directories as files are modified or deleted locally at the client or at the remote location; and tracking connection states and version of physical shares that correspond to at least one object along a path that facilitates updating a tree connect structure in a continuous manner (step 1208, Fig.10F; col.10, lines 44-49; col.56, line 62 to col.57, line 19; col.56, line 29 to col. 57, line 19, Wolff).

Regarding claim 36, Wolff discloses a system that facilitates maintaining access to remote files (e.g., server-based) during any period of disconnect from a remote location, comprising:

- means for providing one or more client computers, each client computer comprising a local data store (client A-B, Fig.11A and corresponding text and col. 15, lines 49-58, Wolff); and

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- means for selectively caching one or more file objects from at least one online server (Fig. 1A-C, Fig. 3A-C corresponding text and col. 15, lines 49-58; col.7, lines 38-44 and line 62 to col.8, line 11; col.10, lines 13-19, Wolff)

Wolff does not explicitly disclose the respective data store for subsequent offline use by the client computer. Mansour discloses a platform-independent distributed user interface server architecture that clients can perform actions and operations offline ([0153]; [0155]-[0158] and [0161], Mansour). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolff to include the claimed feature as taught by Mansour because it would provide an efficient system with flexibility of sharing data resources and easily support ([0017], Mansour).

Regarding claim 37, Wolff/Mansour combination discloses the system of claim 36, further comprising means for maintaining access to the one or more files cached while offline ([0153]; [0155]-[0158] and [0161], Mansour).

Regarding claim 38, Wolff/Mansour combination discloses the system of claim 36, further comprising means for caching one or more Gle access parameters that correspond to the one or more cached file objects to permit client access to the file objects while offline ([0153]; [0155]-[0158] and [0161], Mansour).

Regarding claim 39, Wolff/Mansour combination discloses the system of claim 36, when connected to the remote location, means for retrieving a file object from the local data store to mitigate bandwidth usage with respect to accessing the remote location despite being connected to the remote location (col. 7, lines 19-35, Wolff).

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Regarding claim 40, Wolff/Mansour combination discloses the system of claim 36, further comprising: means for mapping a logical namespace to a physical namespace to facilitate keeping track of cached Gles and enumerating directories as files are modified or deleted locally at the client or at the remote location', and means for tracking connection states and version of physical shares that correspond to at least one object along a path that facilitates updating a tree connect structure in a continuous manner (step 1208, Fig.10F; col.10, lines 44-49; col.56, line 62 to col.57, line 19; col.56, line 29 to col. 57, line 19, Wolff).

6. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolff (US 6,185,601) in view of Mansour et al. (US Pub. 2002/0109718 A1) and further in view of Shaw et al. (US Pub. 2002/0083148 A1)

Regarding claim 6, Wolff/Mansour combination discloses all of the claimed limitation as discussed above, except automatic caching and manual caching based at least in part upon user preferences. Shaw discloses a system and method for sender initiated caching of personalized content including the step of substantial caching based at least in part on the user preference (abstract; [0004] and [0019], Shaw). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination system of Wolff and Mansour to include the claimed feature as taught by Shaw. The motivation of doing so would enhance the system's speed ([0002], Shaw).

Regarding claim 17, Wolff/Mansour combination discloses all of the claimed limitation as discussed above, except substantial all CSC agents that it is online to mitigate latency. Shaw discloses a system and method for sender initiated caching of personalized content including the step of substantial caching based at least in part on the user preference (abstract; [0004] and

[0019], Shaw). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination system of Wolff and Mansour to include the claimed feature as taught by Shaw. The motivation of doing so would enhance the system's speed ([0002], Shaw).

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Housel, III et al. (US 6,453,343) disclose methods, systems and computer program products for maintaining a common checkpoint cache for multiple sessions between a single client and server.

2. Vaduvur et al. (US 6,446,088) discloses an application-directed variable granularity caching and consistency management.

3. Anderson et al. (US 6,047,356) disclose a method of dynamically allocating network node memory's partitions for caching distributed files.

4. Carlson (US 6,697,849) discloses system and method for caching Java server pages responses.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh B Thai whose telephone number is 571-272-4029. The examiner can normally be reached on 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh B Thai  
Examiner  
Art Unit 2161

January 12, 2005



**UYEN LE**  
PRIMARY EXAMINER